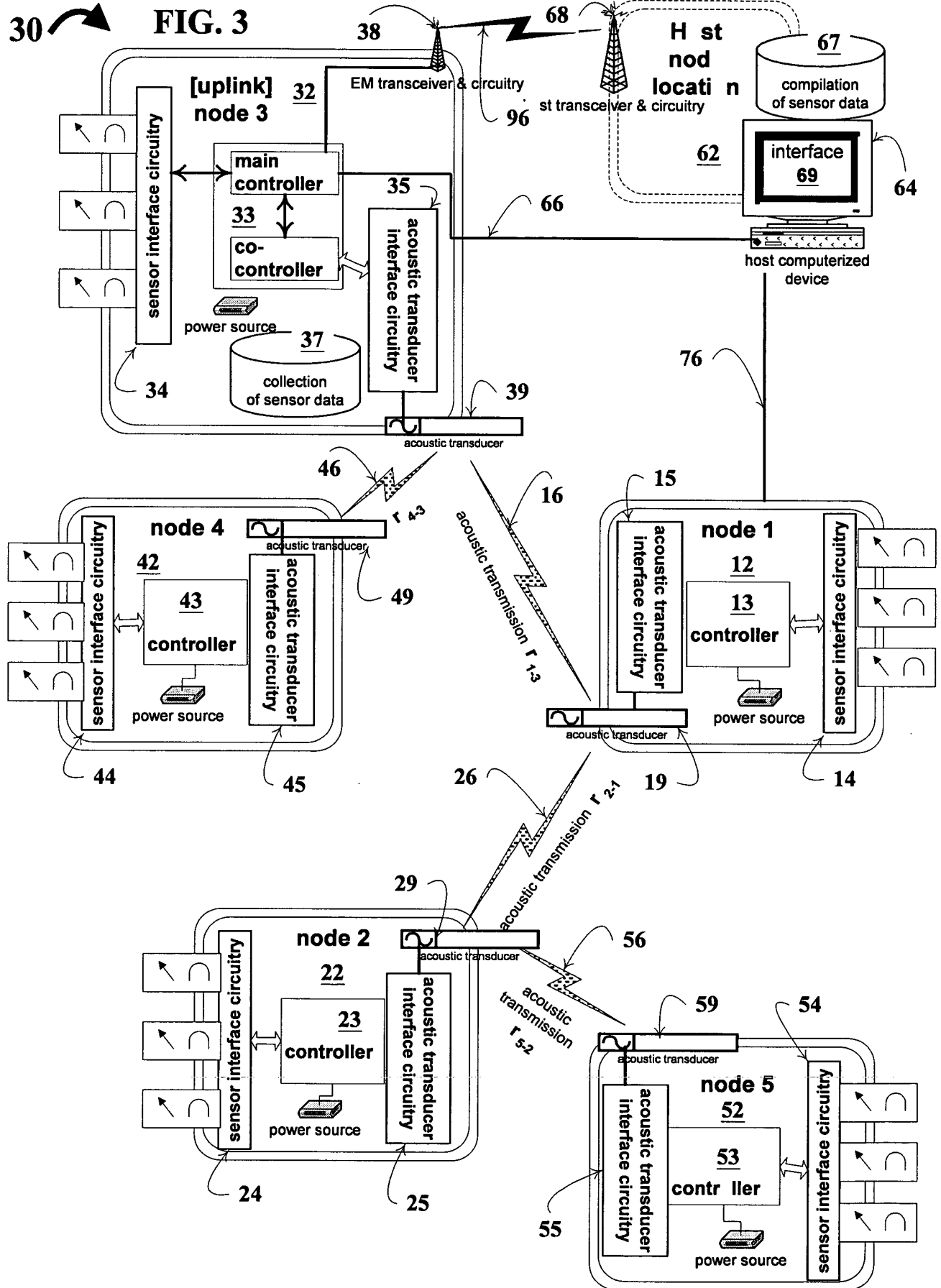


30

FIG. 3



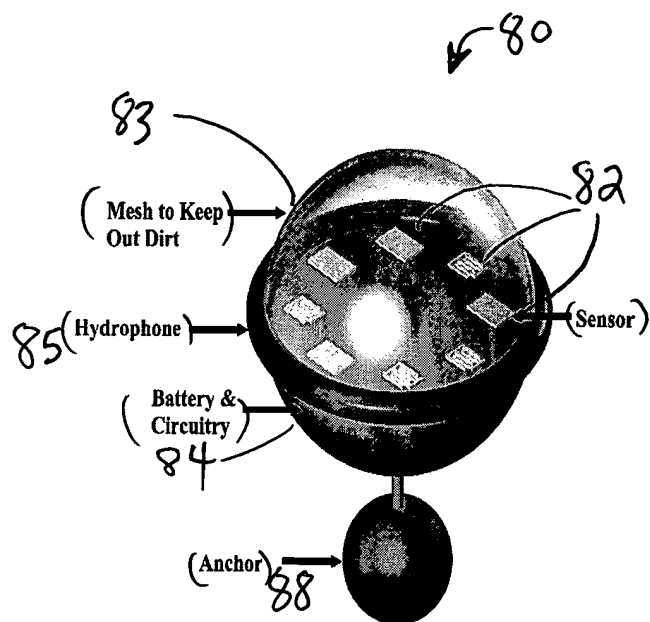


FIG. 4

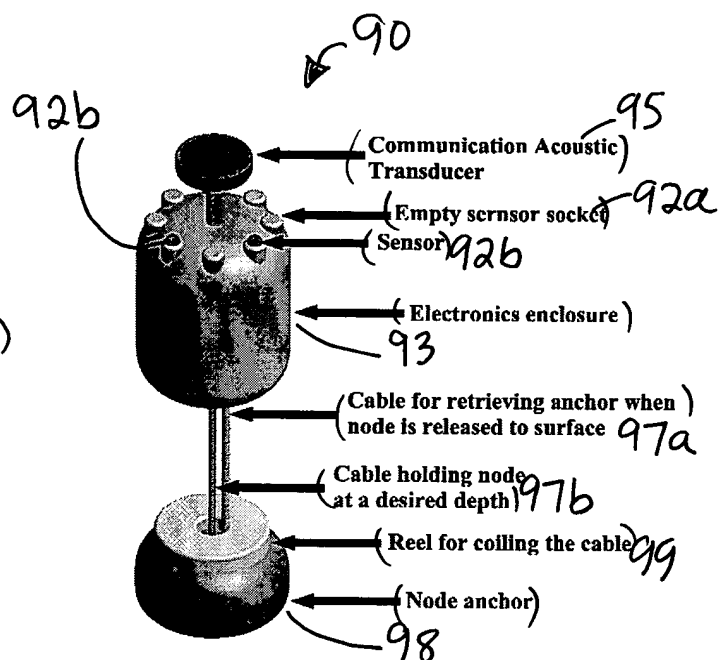


FIG. 5

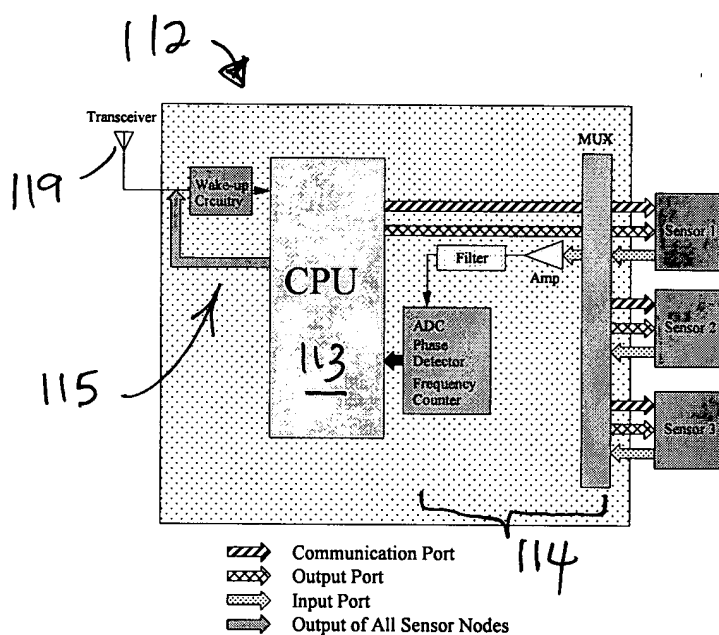


FIG. 6

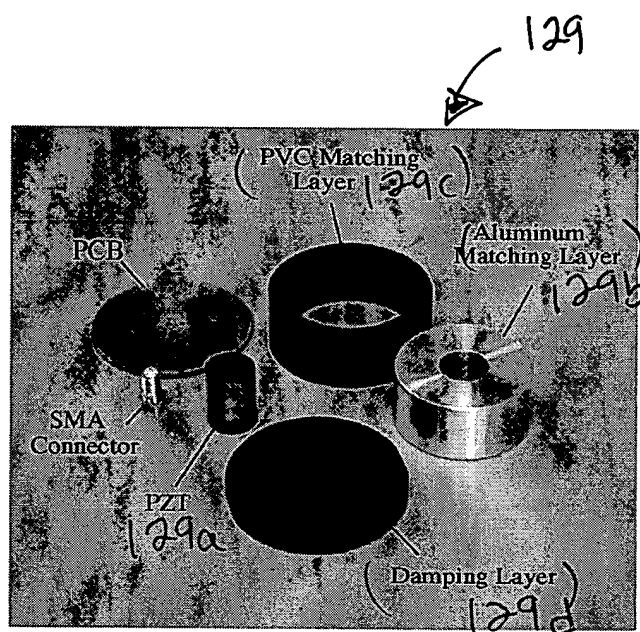


FIG. 7

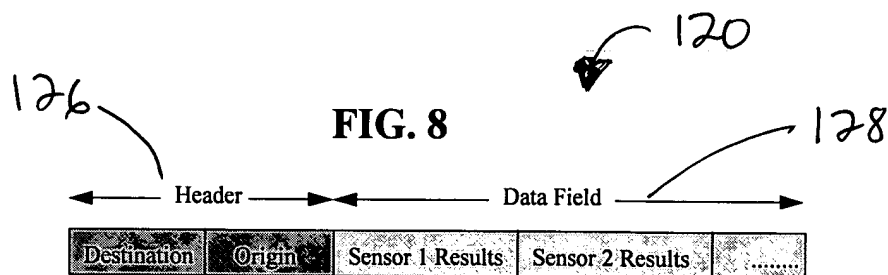
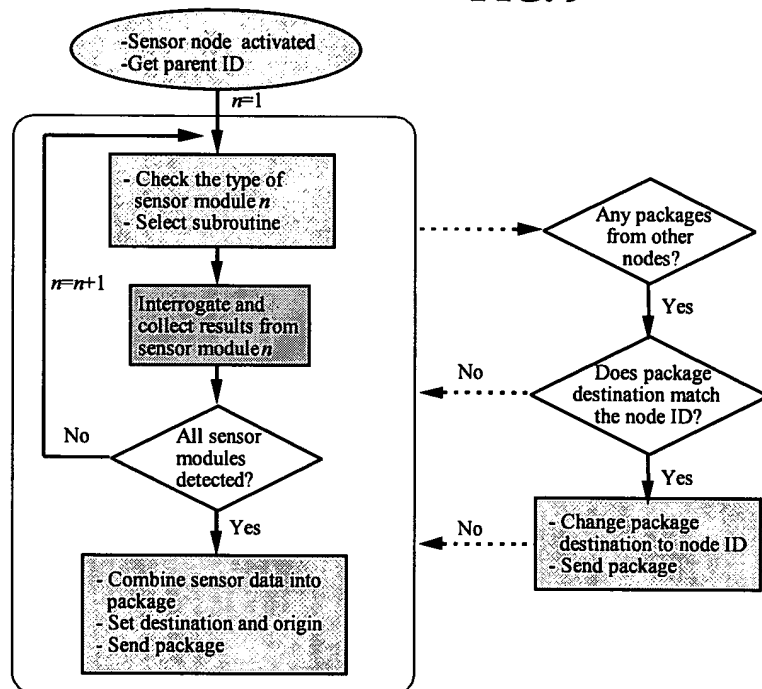


FIG. 8

130

FIG. 9



140

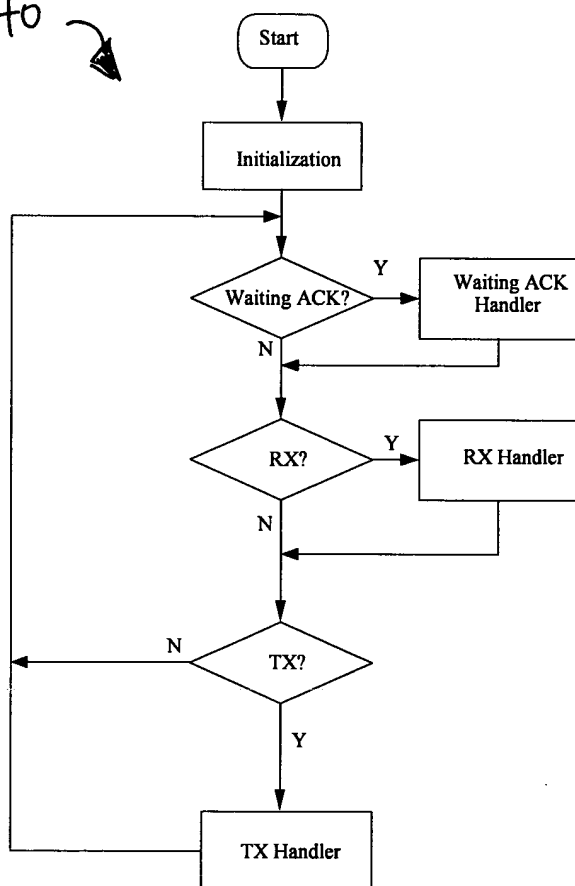


FIG. 10

150

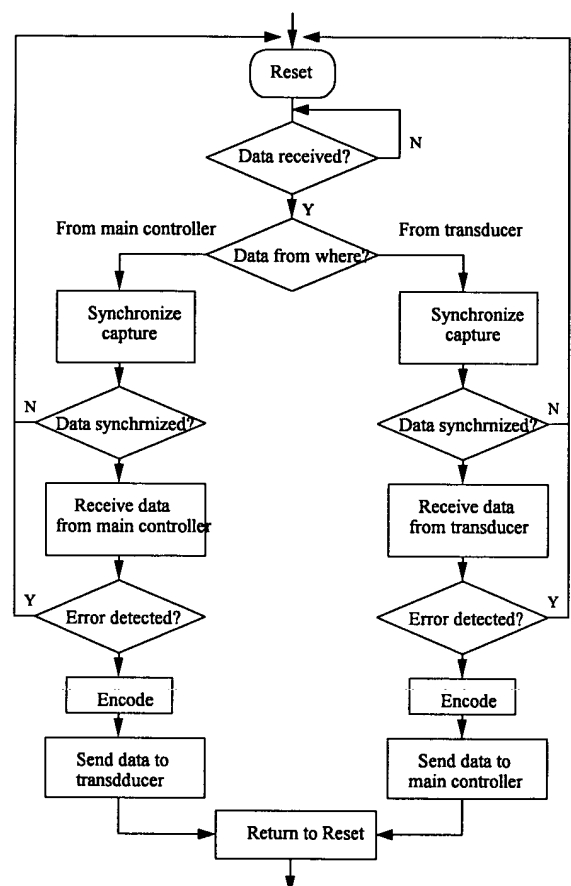


FIG. 11

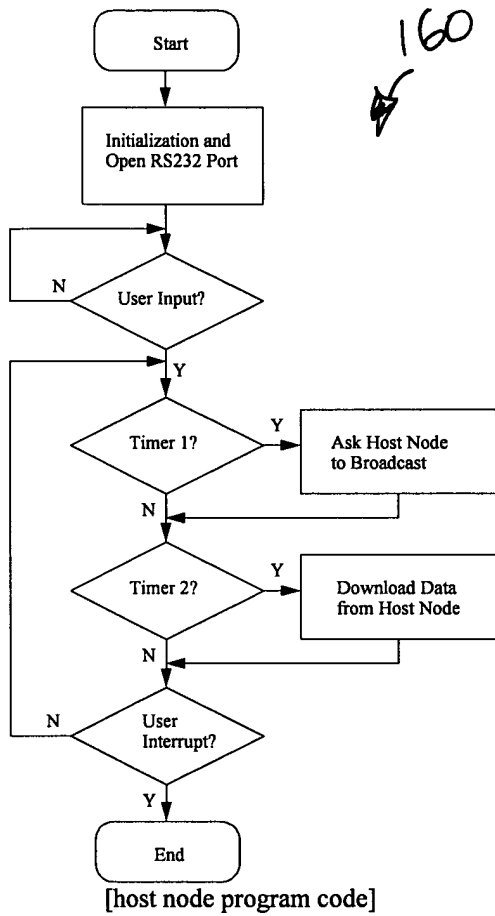


FIG. 12

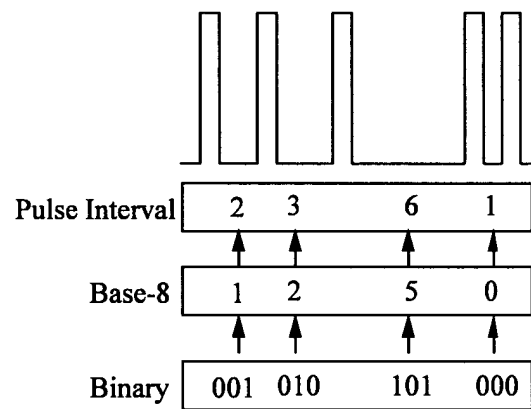
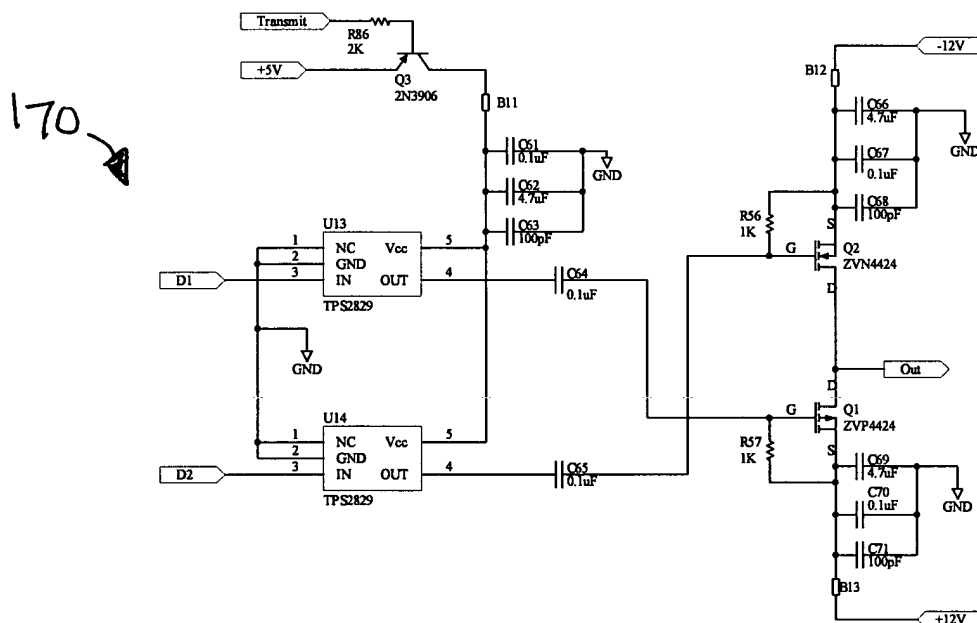


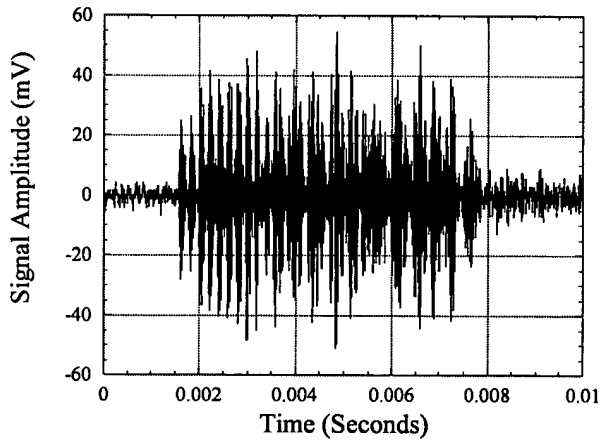
FIG. 14

FIG. 13



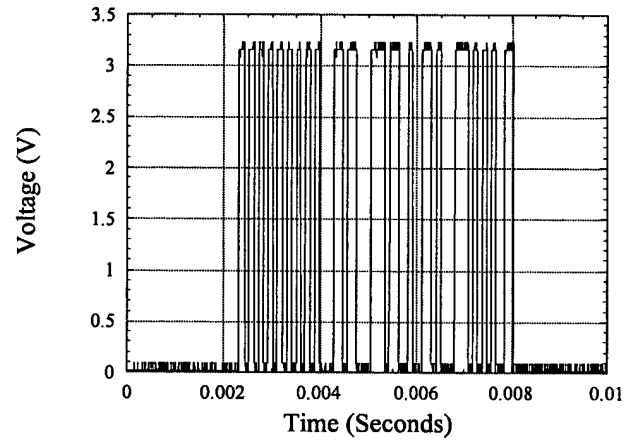
Circuitry to convert digital signals from the [main] node assembly controller to voltage pulses for the transducer.

FIG. 15A



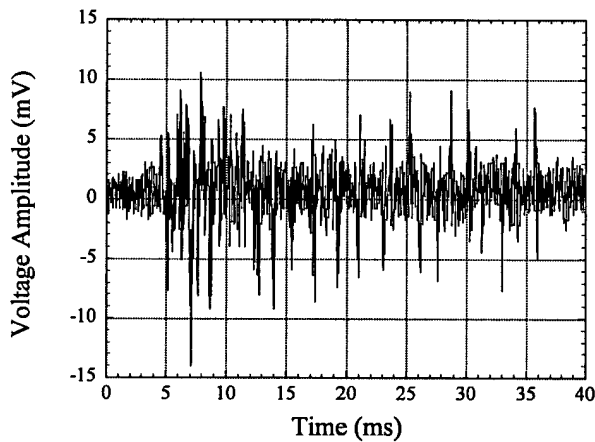
acoustic signals modulated using on-off (OOK) technique.

FIG. 15B



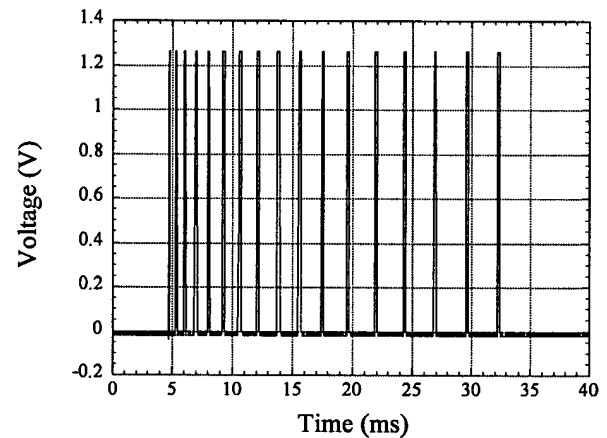
The digitized OOK modulated data package as converted

FIG. 16A



acoustic signals modulated using DPIM technique.

FIG. 16B



The digitized DPIM modulated data package as converted

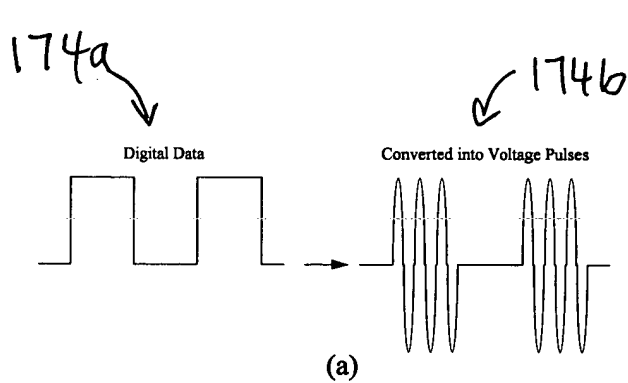


FIG. 17A

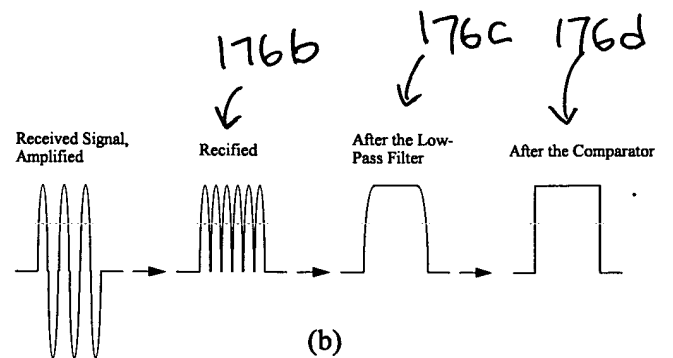
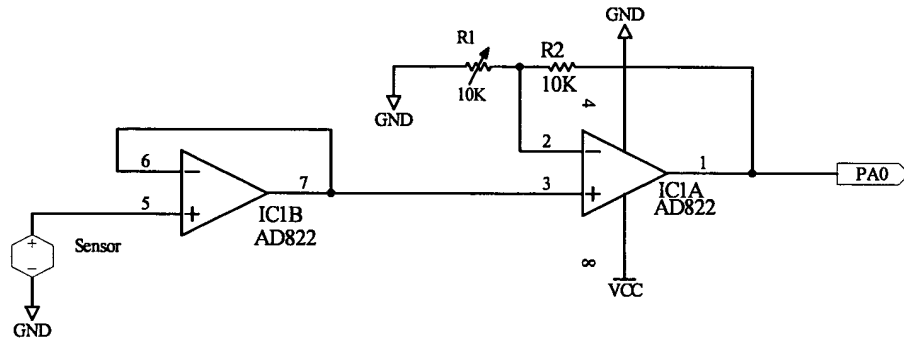


FIG. 17B

180

FIG. 18



sensor interface circuitry for potential-based sensors (e.g., thermistors)

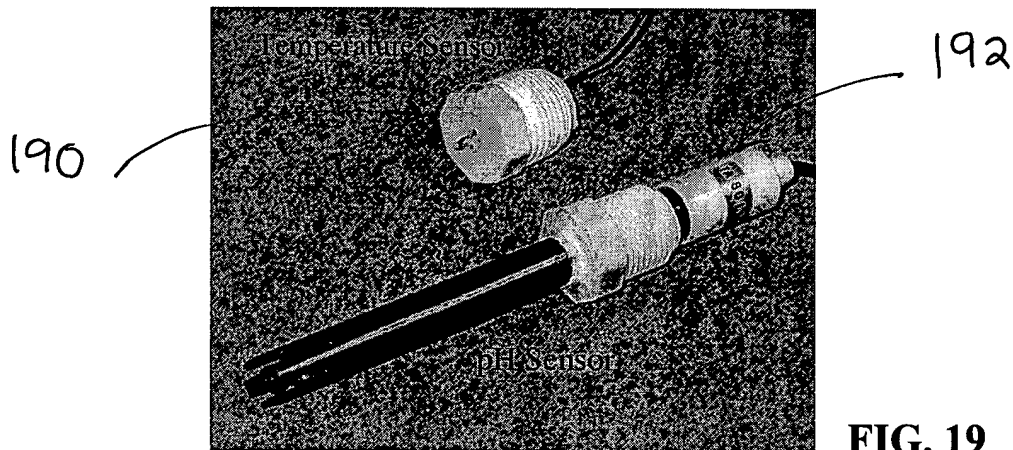
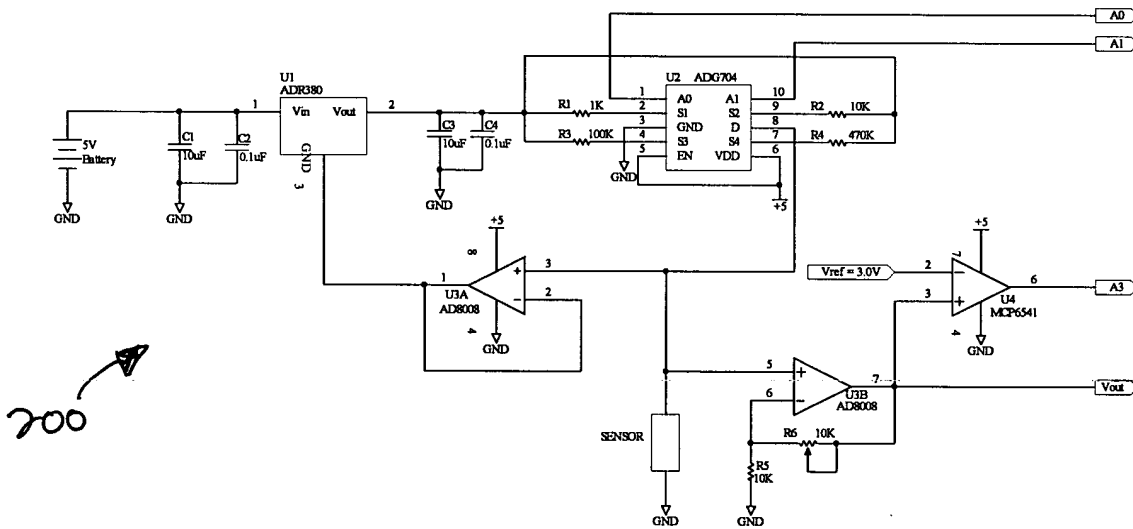


FIG. 19



200

FIG. 20 sensor interface circuitry for resistive sensors.

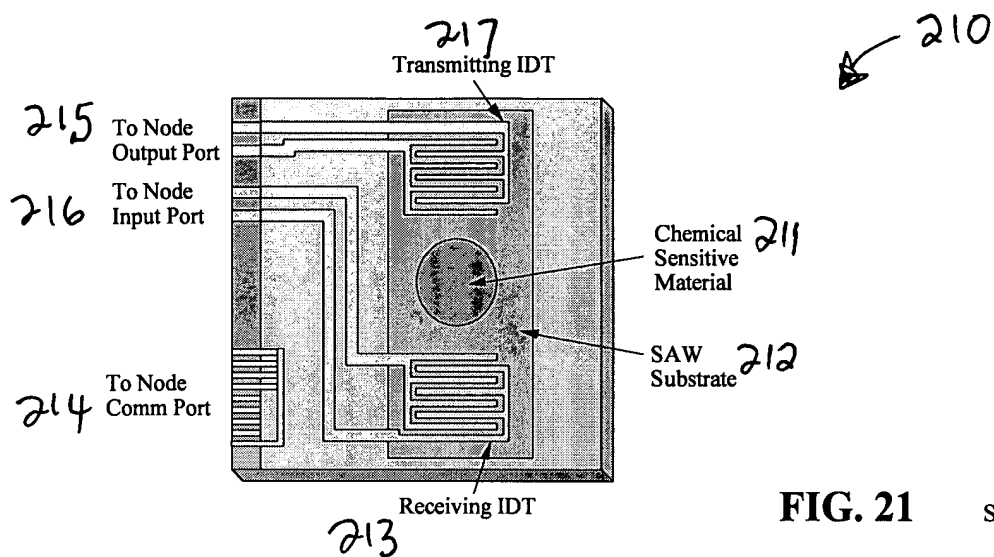


FIG. 21 SAW sensor module/element

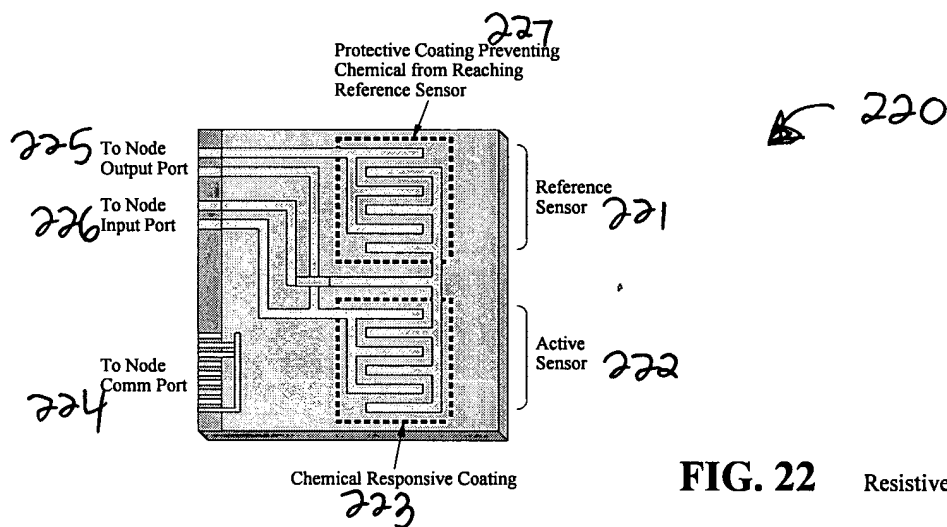


FIG. 22 Resistive/capacitive (impedance) sensor module/element

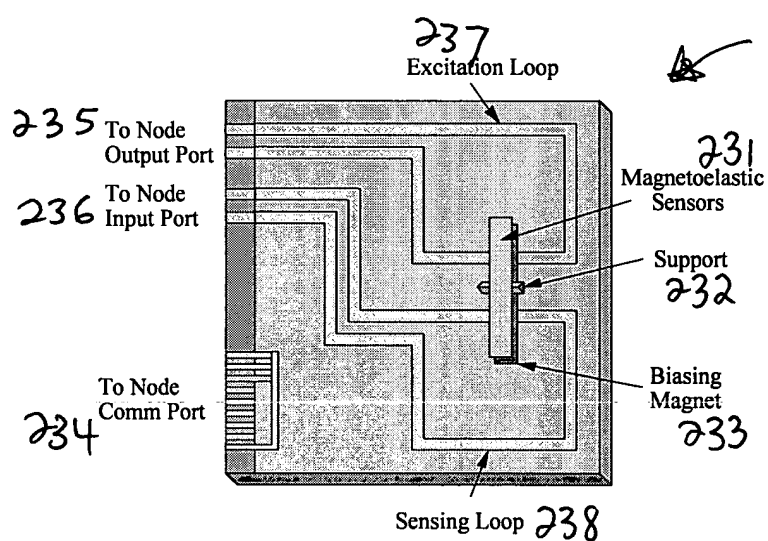


FIG. 23A

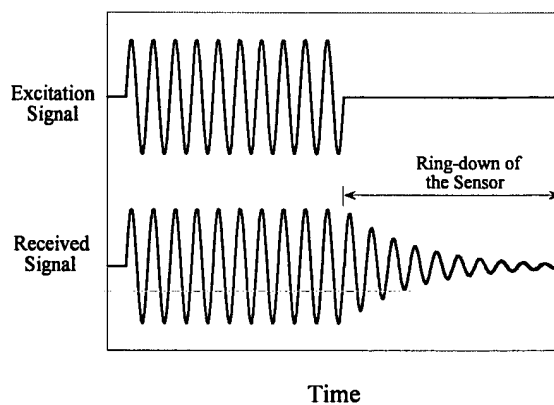


FIG. 23B

FIG. 24

